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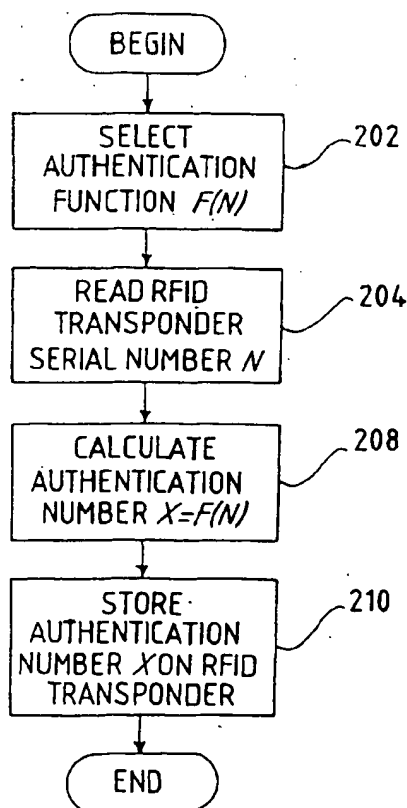
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- (71) Applicant: ZIH CORP. [US/US]; 1201 Market Street, Wilmington, DE 19801 (US). (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK,
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[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR ARTICLE AUTHENTICATION



(57) Abstract: An authentication method for authenticating an article (Fig. 2a, 202, 204, 208, 210) in a device includes the steps of a) reading an identification number stored on the article, b) reading an authentication number stored on the article, c) determining an input number based at least in part on the identification number, d) applying an authentication function to the input number to calculate an output number, e) determining that the article is authentic only if the authentication number corresponds to the output number, and f) permitting use of the article in the device if the article is authentic, and disabling use of the article in the device if the article is not authentic.



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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/26617

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04L 9/00; G06F 15/16

US CL : 713/150; 705/50

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 713/150; 705/50

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
ACM Portal; IEEE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
ACM Portal; IEEE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,754,656 A(NISHIOKA et al) 19 May 1998 (19.05.1998), see entire document ...	1-66
A	US 6,049,610 A(CRANDALL) 11 April 2000 (11.04.2000), see entire document ...	1-66
A	US 5,805,703 A(CRANDALL) 08 September 1998 (08.09.1998), see entire document ...	1-66
A	US 5,995,626 A(NISHIOKA et al) 30 November 1999 (30.11.1999), see entire document ...	1-66
A	US 5,724,425 A(CHANG et al) 03 March 1998 (03.03.1998), see entire document ...	1-66
A	US 6,099,178 A(SPURR et al) 08 August 2000 (08.08.2000), see entire document ...	1-66
A	Using smart cards to authenticate passwords, Chang, C.-C.; Hwang, R.-J.; Buchrer, D.; Security Technology, 1993. Security Technology, Proceedings. Institute of Electrical and Electronics Engineers 1993 International Carnahan Conference on , 13-15 Oct 1993 Page(s): 154 -156	1-66

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## C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	An ID-based cryptographic technique for IFF, Tu, K.; Military Communications Conference, 1995. MILCOM '95, Conference Record, IEEE , Volume: 3 , 8 Nov 1995 Page(s): 1258 -1262 vol.3	1-66
A	Rajiv Gupta; Scott A. Smolka; Shaji Bhaskar; "On Randomization in Sequential and Distributed Algorithm" ; ACM Computing Surveys (CSUR), Volumn 26, Issue 1, (March 1994) Pages: 7-86	1-66